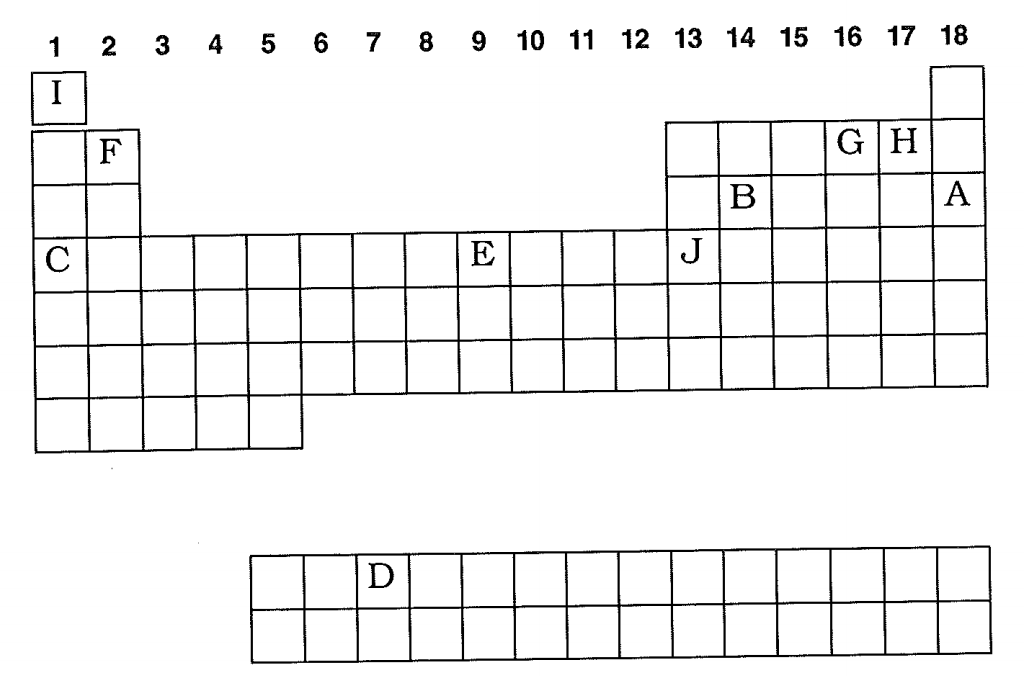
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Atomic Radius Practice Problems**

1. Arrange the following sets of elements in order of increasing atomic radius.
   1. N, C, O, F \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. F, Cl, Br, I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Rb, P, As, Co \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Mg, Si, Ar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. N, As, Bi \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What makes a sodium atom different from a magnesium atom?
3. Explain why the Neon atom is the smallest atom in the 2nd energy level.

1. Explain why the atomic radii of Helium and Neon are so close when considering Neon has 1 more energy level.
2. Which of the following has the largest atomic radius?
   1. K
   2. Be
   3. Na
   4. Mg
3. Which of the following has the smallest atomic radius?
   1. F
   2. N
   3. B
   4. Al
4. Which group contains the elements with the smallest radii on the periodic table?
   1. Halogens
   2. Alkali metals
   3. Noble gases
   4. Alkaline earth metals
5. Which of the noble gases has the smallest atomic radius?
   1. F
   2. He
   3. At
   4. Rn
6. Which of the following is an accurate statement?
   1. Na is bigger than Mg
   2. Atomic radius decreases across a period because there are less protons as you go across
   3. There are no differences in the periodic table regarding atomic radius
   4. N is smaller than Fr
7. Order the following elements from biggest to smallest: Ti, Cr, K, Ge
   1. K, Ti, Ge, Cr
   2. Ge, Cr, Ti, K
   3. K, Ti, Cr, Ge
   4. Ti, Cr, Ge, K
8. Which of the following is the correct definition for atomic radius?
   1. Half the distance between the nuclei of two bonded atoms
   2. Measured on the Pauling scale
   3. Measured in micrometers
   4. Atomic radius is the distance between the nuclei of two bonded atoms

**PERIODIC TABLE PUZZLE**



***Place the letter of each of the above elements next to its description below.***

1. \_\_\_\_\_\_\_\_\_ An alkali metal
2. \_\_\_\_\_\_\_\_\_ An alkaline earth metal
3. \_\_\_\_\_\_\_\_\_ A nonreactive gas
4. \_\_\_\_\_\_\_\_\_ A reactive nonmetal
5. \_\_\_\_\_\_\_\_\_ An element with metallic and non-metallic properties
6. \_\_\_\_\_\_\_\_\_ A transition metal
7. \_\_\_\_\_\_\_\_\_ An element with a charge of -2
8. \_\_\_\_\_\_\_\_\_ A metal with a charge of +3
9. \_\_\_\_\_\_\_\_\_ A nonmetal with a charge of +1